ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY MANAGEMENT

Enhanced Inspection and Maintenance Program

Proposed Amendments: N.J.A.C. 7:27-15.5 and 15.6; N.J.A.C. 7:27B-4.2,4.4, 4.5, 4.6, 4.7, 4.9, 4.10, and 4.14.

Authorized: By Robert C. Shinn, Jr., Commissioner, Department of Environmental Protection.

Authority: N.J.S.A. 13:1B-3(e), 13:1D-9, 26:2C-8 et seq., specifically 26:2C-8 through 8.5, and 8.11, and N.J.S.A. 39:8-41 et seq.; specifically, 41-58.

DEP Docket Number: 19-99-08/705

Proposal Number: PRN 1999-

A public hearing concerning this proposal will be held at 10:00 a.m. on **Monday, September 27, 1999 at:**

First Floor Public Hearing Room
Department of Environmental Protection
401 E. State Street
Trenton, New Jersey

Submit written comments, identified by the DEP Docket Number given above, by **October 7, 1999**, to:

Attn: Michael P. Marotta, Esq.
DEP Docket No. 19-99-08/705
Office of Legal Affairs
New Jersey Department of Environmental Protection
PO Box 402
Trenton, N.J. 08625-0402

Several documents are cited within this notice as references or as documents being incorporated by reference. Copies of these documents may be requested from:

New Jersey Department of Environmental Protection
Public Access Center
401 E. State Street, 1st floor
PO Box 402
Trenton, N.J. 08625

An additional source of documents cited within this notice as documents being incorporated by reference are available from the World Wide Web from the website of the United States Environmental Protection Agency (EPA) Office of Mobile Sources at the following Internet address: www.epa.gov/omswww.

Copies of the documents incorporated by reference may also be obtained from the Office of Administrative Law.

Visit our website at: www.state.nj.us/dep/aqm, where Air Quality Management rules, proposals, adoptions and SIP revisions are available, or download the proposal electronically from the Department's Air Quality Regulations Bulletin Board. The compressed file, IMPROP99.ZIP, contains WordPerfect® 5.1 and ASCII documents and is located in file area #35 (Air: Props, Adopts, & Notices). The data line number for the Bulletin Board is (609) 292-2006. (Data bit: 8; Parity: N; Stop bit: 1).

The agency proposal follows:

Summary

The Department of Environmental Protection (the Department) is proposing amendments to N.J.A.C. 7:27-15 (Control and Prohibition of Air Pollution from Gasoline-Fueled Motor Vehicles) and N.J.A.C. 7:27B-4 (Air Test Method 4: Testing Procedures for Motor Vehicles), its rules governing the test procedures, emission standards and equipment specifications for the inspection of gasoline-fueled motor vehicles.

Background

Under the Clean Air Act Amendments of 1990, New Jersey is required to implement an enhanced inspection and maintenance (I/M) program to assist the State in attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for both ozone and carbon monoxide (CO). On October 2, 1995, the Department adopted new rules and amendments to N.J.A.C. 7:27-15 and N.J.A.C. 7:27B-4, which established the necessary test procedures and standards for implementation of an enhanced I/M program for light-duty, gasoline-fueled motor vehicles in New Jersey. These new rules and amendments

were published on that date in the New Jersey Register. (See 27 N.J.R. 3806(a).) The Department of Transportation, (DOT), Division of Motor Vehicles (DMV), published its adopted complementary rules (which provided for the operational requirements of the enhanced I/M program) on that same date. (See 27 N.J.R. 3820(a).)

On March 27, 1996, the Department submitted both its and the DMV's proposals to the EPA as part of an enhanced I/M State Implementation Plan (SIP) revision. The EPA granted a conditional interim approval of the State's enhanced I/M SIP, including the March 27, 1996 SIP revision on May 14, 1997.(See 62 Fed. Reg. 26401),

Both the Department and the DMV subsequently modified the enhanced I/M program design (See 28 N.J.R. 2298(b) and 2334(a) and 29 N.J.R. 726(a) for the May 6, 1996 and March 3, 1997 proposals, and see 29 N.J.R. 498(a) and 788(a) and 29 N.J.R. 2826(b) for the February 3, 1997, March 3, 1997, and July 7, 1999 adoptions.)

This proposal represents the latest in this series of refinements to the enhanced I/M program. For the most part, the changes to the Department's enhanced I/M program rules at N.J.A.C. 7:27-15 and N.J.A.C. 7:27B-4 are relatively minor in nature, generally reflecting refinements in the test procedures, updated references to federal equipment specifications and test procedures and stylistic and clerical corrections. Of a more substantive nature, the Department is proposing, consistent with the EPA's enhanced I/M program regulations, to delay by two years the implementation of on-board diagnostic (OBD) testing. The Department also proposes delaying by two years the date upon which the final emission standards become effective, to reflect the delay in the implementation of the State's enhanced I/M program, in order to allow one full cycle of biennial testing using the start-up standards originally intended to be used for that purpose. Similarly, because the EPA has not yet promulgated a test procedure that would be universally applicable and practical for all vehicles which will be subject to enhanced I/M testing this December, the Department proposes to delete both the requirements and procedures for purge testing, reserving the applicable subsections or section until such time as they are promulgated by the EPA. The Department also proposes to substitute a newer version of the EPA's fuel cap leak test procedures at such time as the EPA promulgates these procedures in its rules. Until

then, the fuel cap leak test in use is the one set forth in the EPA's technical guidance document, as described at N.J.A.C. 7:27B-4.12(a).

A more detailed explanation of the proposed amendments follows.

N.J.A.C. 7:27-15.5 - Motor vehicle inspections

The Department is proposing a number of changes to this section which are clerical or stylistic in nature, serving only to correct references to other rules or reflect changes in the status of the EPA SIP approval process, as follows:

Corrected citations: When the Department amended its rules at N.J.A.C. 7:27-14 and N.J.A.C. 7:27B-4 as they relate to the diesel inspection and maintenance (I/M) program on September 15, 1997, it made certain changes to the sections in N.J.A.C. 7:27B-4 which relate to the enhanced I/M program for gasoline-fueled motor vehicles. As a result, references to these sections contained in N.J.A.C. 7:27-15 are no longer correct. Specifically, the Department repealed N.J.A.C. 7:27B-4.4, when it adopted at N.J.A.C. 7:27B-4.3 new diesel test procedures for heavy-duty diesel vehicles and diesel buses to determine compliance with the peak smoke opacity standards set forth at N.J.A.C. 7:27-14.6. These new procedures replaced those which had been codified at N.J.A.C. 7:27B-4.3 and 4-4. Accordingly, the Department repealed N.J.A.C. 7:27B-4.4 and recodified N.J.A.C. 7:27B-4.5 through N.J.A.C. 7:27B-4.13 as N.J.A.C. 7:27B-4.4 through N.J.A.C. 7:27B-4.12. Through an oversight, the Department neglected to reflect these changes in the cross-references within those sections of N.J.A.C. 7:27-15 and N.J.A.C. 7:27B-4 which regulate the testing of gasoline-fueled motor vehicles. The Department proposes to correct these references at N.J.A.C. 7:27-15.5(f)1, 3, 4, 6, and 7; N.J.A.C. 7:27-15.5(g)1i, ii, 2, and 3; N.J.A.C. 7:27-15.5(i)1- 4; and N.J.A.C. 7:27-15.5(l).

EPA SIP approval status update: As originally drafted, this section refers repeatedly to a date "twelve months after the EPA's interim approval of the Enhanced I/M SIP Revision" as the date after which certain tests are to be included in the motor vehicle inspection. This date has now passed (the EPA granted interim approval of the State's Enhanced I/M SIP Revision on May 14, 1997). Because it is confusing and not useful to

refer to the operative date of the enhanced I/M program inspection requirements in this way, this language is deleted at N.J.A.C. 7:27-15.5(f) 4, (g)1ii, and (i)4.

Stylistic changes: The Department proposes stylistic changes to the text at N.J.A.C. 7:27-15.5(f), (g) and (i), primarily to substitute language referring to the model year of a vehicle in the form "a motor vehicle of model year 1999 or later (or earlier)" for language in the form "post 1998 model year" or "model year 1999 and newer". The proposed substitution of this language will improve clarity and consistency in the rule text.

The Department is also proposing a clarifying change to the N.J.A.C. 7:27-15.5, as follows:

Clarifying change: The Department proposes, by amending text at N.J.A.C. 7:27-15.5(l), to clarify that the program evaluation test which the DMV will be conducting on at least 0.1 percent of the motor vehicles subject to enhanced I/M inspection will consist of one or more, rather than two, IM240 tests.

Finally, the Department is making changes which are substantive in nature, as follows:

Substantive changes:

Purge test requirements: The Department proposes to delete the requirement currently set forth at N.J.A.C. 7:27-15.5(f)5 to perform an evaporative systems purge test on model year 1981 and newer motor vehicles. The EPA has not yet developed a practical and universally acceptable method for performing the purge test on the various makes and models of motor vehicles that would be subject to this test. The Department has reserved this subsection and has committed to implementing this test procedure when an acceptable method becomes available.

OBD requirements: At N.J.A.C. 7:27-15.5(f)7, the Department proposes changing the date on and after which an on-board diagnostics (OBD) test is a required component of the motor vehicle inspection checks from January 1, 1998 to January 1, 2001. This change reflects a change in the EPA requirements regarding this test set forth at 40 CFR

Parts 51.357(a)12, 51.373(g) and 85.2222, effective May 4, 1998. (See 63 F.R. 24,429, May 4, 1998, which can also be viewed or downloaded from the Internet at the following URL: http://www.access.gpo.gov/su_docs/aces/aces140.html.) By its May 4, 1998 final rule, the EPA revised the federal vehicle inspection and maintenance (I/M) rules relating to the implementation deadline by which states are required to begin OBD checks as a routine part of basic and enhanced I/M programs. This rule change delayed to January 1, 2001, the required implementation date for OBD in basic and enhanced I/M program areas in the Ozone Transport Region (OTR) and in all other areas. During this time extension the EPA expects to generate, collect and analyze the data necessary to accord OBD checks the appropriate level of emission reduction credits. Similarly, the DMV's testing contractor will begin to perform this test for evaluation purposes, only, at selected centralized testing centers, now known as official inspection facilities, or OIFs.

Use of the 2500 RPM test on vehicles with non-disengageable traction control:

Because motor vehicles which emply non-disengageable traction control are, like motor vehicles which emply full-time four-wheel drive, unsuited for testing on a dynamometer, the Department proposes to amend N.J.A.C. 7:27-15.5(g)3.i to provide that they, like their four-wheel drive counterparts, will be tested using the 2500 RPM test instead of the ASM5015 5015, if they are of model year 1981 or later.

7:27-15.6 Motor vehicle inspection standards

The Department is making both substantive and non-substantive changes to N.J.A.C. 7:27-15.6, as follows:

Corrected citations: As explained above, when the Department last amended its rules at N.J.A.C. 7:27-14 and N.J.A.C. 7:27B-4 as they relate to the diesel inspection and maintenance (I/M) program, it made certain changes to the sections in N.J.A.C. 7:27B-4 which relate to the enhanced I/M program for gasoline-fueled motor vehicles. As a result, references to these sections contained in N.J.A.C. 7:27-15 are no longer correct. Accordingly, the Department proposes to correct these references at N.J.A.C. 7:27-

15.6(a); N.J.A.C. 7:27-15.6(b)1, 2, 3 and 4; N.J.A.C. 7:27-15.6(c); and N.J.A.C. 7:27-15.6(d).

Substantive change; delayed final emission standards or cutpoints:

The original design of New Jersey's enhanced I/M program included a two-year phase in of the standards to be applied with the new tests (initially the IM240, and later the ASM5015). Tables 3 and 4 of N.J.A.C. 7:27-15.6, which set forth the exhaust emission standards for the ASM5015 test, currently reflect a two-year phase-in based on a then-anticipated start-up date for the enhanced I/M program of January 1, 1998. In order to allow for a two-year phase-in of these standards, based on the current anticipated start-up date of early December 1999, the Department proposes amending the dates in the headings of Tables 3 and 4 to delay by two years the starting date for the final vehicle emission standards, (otherwise known as the final cutpoints), that is, from January 1, 2000 to January 1, 2002.

7:27B-4.1 Definitions

The Department proposes amending the definition of the term inspector to include a reference to tests conducted pursuant to N.J.A.C. 7:27-15 as well as N.J.A.C. 7:27-14, so that this term can also be used in provisions of this subchapter which relate to the testing of gasoline-fueled motor vehicles.

N.J.A.C. 7:27B-4.2 - General instructions for all tests

Originally promulgated in 1985, N.J.A.C. 7:27B-4, otherwise known as Air Test Method 4, has served to describe the testing procedures and equipment specifications to be followed in testing both diesel-powered motor vehicles (pursuant to N.J.A.C. 7:27-14) and gasoline-fueled motor vehicles (pursuant to N.J.A.C. 7:27-15). In the ensuing 14 years, both these testing programs have grown considerably, requiring revisions to Air Test Method 4 which have occasionally made some of the sections somewhat unwieldy. N.J.A.C. 7:27B-4.2 is a case in point. This section sets forth general testing instructions applicable to both diesel-powered and gasoline-fueled motor vehicles at N.J.A.C. 7:27B-4.2(a), which apparently was sometimes confusing to the reader. Accordingly, the

Department proposes to segregate these general instructions so that those which apply to the testing of diesel-powered motor vehicles will now appear at N.J.A.C. 7:27B-4.2(a), and those which apply to the testing of gasoline-fueled motor vehicles will now appear at N.J.A.C. 7:27B-4.2(b). Additional proposed changes to N.J.A.C. 7:27B-4.2(a) and the proposed new 4.2(b) are as follows:

-The reference to equipment calibration at 4.2(a)1 is deleted and replaced by a requirement that the vehicle be tested in as-received condition;

-The reference at 4.2(a)7 to accessories being turned off prior to testing is expanded to include air conditioning, heating, defroster, radio and lights;

-The new N.J.A.C. 7:27B-4.2(b), as explained above, contains general directions which apply to the testing of gasoline-fueled motor vehicles. With the exception of the provisions at 4.2(b)8, all these directions either were already in the rules at 4.2(a) or are generally contained elsewhere in N.J.A.C. 7:27B-4. That is, the requirement at 4.2(b)1 was contained in 4.5(a)1, and 4.6; the requirement at 4.2(b)2 was set forth at 4.2(a)7; the requirement at 4.2(b)3 was set forth at 4.2(a)1; the requirements at 4.2(b)4 and 5 were set forth in a similar fashion at 4.2(a)3; and the requirements at 4.2(b)6 and 4.2(b)7 were set forth in a similar fashion at 4.4(b)2, 4.5(a)2 and 4.6(c)5. The Department proposes adding the requirements at 4.2(b)(8) regarding tire pressure for tests using a chassis dynamometer to further ensure the safety and integrity of these tests.

-The Department proposes adding a provision at 4.2(d) to parallel that currently set forth at 4.2(b) to articulate the requirement that equipment used in testing gasoline-fueled motor vehicles, as well as diesel-powered motor vehicles, meet the requirements for such equipment set forth at N.J.A.C. 7:27B-4.14.

-The remaining changes to 4.2(a) and 4.2(b) are stylistic in nature, primarily switching from the passive to the active voice for easier reading, or making corrective recodifications.

N.J.A.C. 7:27B-4.4 - Procedures for the visible smoke test and idle test

The Department proposes changes to N.J.A.C. 7:27B-4.4 which are both clerical and substantive in nature. The clerical changes would shift the rule text from the passive to the active voice. In addition, the Department proposes adding provisions at N.J.A.C. 7:27B-4.4(a)4 and N.J.A.C. 7:27B-4.4(b)5 which would clarify that a vehicle which meets the standards for the visible smoke test and the idle test has passed these tests. These provisions would, in effect, complement the existing provisions at N.J.A.C. 7:27B-4.4(a)3 and N.J.A.C. 7:27B-4.4(b)4, which provide that failure to meet these standards means the vehicle has failed the tests. Finally, the Department proposes to replace references at what will be codified as N.J.A.C. 7:27B-4.4(b)1 to a motor vehicle's "exhaust outlet" or "exhaust pipes" with the term "tailpipe" or "tailpipes", as appropriate, for greater clarity and consistency within N.J.A.C. 7:27B-4.

Of a substantive nature is the Department's proposal to add a "second-chance mode" to the procedures for the idle test at N.J.A.C. 7:27B-4.4(b)3. The second-chance mode, so-called because it literally gives a failing vehicle a second chance to pass, is recommended by both automotive manufacturers and the EPA. By revving the engine of a vehicle which did not meet the idle standards on the first reading to between 2200 and 2800 RPM and then retesting the vehicle after the engine speed returns to idle, the second chance mode reduces the likelihood that vehicles which are marginally in compliance will be given a false failure. The DMV began performing the idle test with a second chance mode several years ago and found that its use significantly reduced the number of false failures of the idle test.

N.J.A.C. 7:27B-4.5 - Procedures for the 2500 RPM test

The Department proposes clerical changes to N.J.A.C. 7:27B-4.5 which would shift the rule text from the passive to the active voice. In addition, the Department proposes a non-substantive change to the section by adding a provision at N.J.A.C. 7:27B-4.5(a)8 which would clarify that a vehicle which meets the standards for the 2500 RPM test has passed the test. This would, in effect, complement the existing provision at N.J.A.C. 7:27B-4.5(b) which provides that failure to meet these standards means the vehicle has failed the test. In addition, as it did with the provisions at N.J.A.C. 7:27-15.5, the Department

proposes stylistic changes to the provisions which will be recodified at N.J.A.C. 7:27B-4.5(a)2 to substitute "a motor vehicle of model year 1995 or later" for "all pre-1996 model year vehicles." The proposed substitution of this language will improve clarity and consistency in the rule text. Also, as it did with the provisions at N.J.A.C. 7:27B-4.4, the Department proposes to replace references at what will be codified as N.J.A.C. 7:27B-4.5(a)1 to "exhaust pipes" with the term "tailpipes", for greater clarity and consistency within N.J.A.C. 7:27B-4. Finally, the Department proposes recodifying N.J.A.C. 7:27B-4.5(b), with stylistic changes, to N.J.A.C. 7:27B-4.5(a)(8).

Of a substantive nature is the Department's proposal to add a "second-chance mode" to the procedures for the 2500 RPM test at N.J.A.C. 7:27B-4.5(a)6, much as it proposes to add this procedure to the idle test, as discussed above. The second-chance mode for the 2500 RPM test involves idling the engine of a vehicle which did not meet the 2500 RPM test standards on the first reading for at least 30 seconds and then repeating the 2500 RPM test. As with the idle test, the second chance mode, when conducted as part of the 2500 RPM test, reduces the likelihood that vehicles which are marginally in compliance will be given a false failure, and is also based on the recommendations of automobile manufacturers.

7:27B-4.6 Procedures for the ASM5015 test

The Department proposes clerical changes to N.J.A.C. 7:27B-4.6 which would shift the rule text from the passive to the active voice. The Department also proposes non-substantive stylistic changes to N.J.A.C. 7:27B-4.6 which would delete instructions at N.J.A.C. 7:27B-4.6(b) which are redundant with those contained at N.J.A.C. 7:27B-4.2. In addition, the provisions of N.J.A.C. 7:27B-4.6(c), (d) and (e) which contain steps to be followed in conducting the ASM5015 are recodified as appropriate as N.J.A.C. 7:27B-4.6(a) 1 through 7. The final non-substantive change the Department proposes is, as proposed in N.J.A.C. 7:27B-4.4 and 4.5, the substitution of the term "tailpipes" for the term "exhaust pipes" for greater clarity and consistency in N.J.A.C. 7:27B-4.

Of a substantive nature is the Department's proposed deletion of the provisions of N.J.A.C. 7:27B-4.6(c)3 which direct the inspector to attach the evaporative purge test

apparatus to the vehicle. Since the Department is proposing to reserve the requirements that an evaporative system purge test be conducted as part of the enhanced I/M testing, this provision is not necessary at this time. In addition, since the ASM5015 no longer includes the evaporative system purge test, the Department proposes deleting N.J.A.C. 7:27B-4.6(d) 6 and 7 which describe how and when to conduct a second chance purge test mode. The Department also proposes to delete the remaining references to the evaporative emissions purge test in N.J.A.C. 7:27B-4.6(a), N.J.A.C. 7:27B-4.6(d)3 and N.J.A.C. 7:27B-4.6(d)4.

The directions to set the dynamometer load currently set forth at N.J.A.C. 7:27B-4.6(c)4 no longer accurately reflect the equipment used in the ASM5015. According, the Department proposes amending these directions to reflect the actual procedure, whereby the instructor, in response to promptings by the testing equipment, enters a number of vehicle parameters, based on which, the dynamometer sets the load. Finally, the Department proposes amending the description of the ASM5015 test procedure sequence (that is, the stabilization and the pass/fail determination) at N.J.A.C. 7:27B-4.6(d) to reflect another recent refinement of the procedure. That is, the Department has streamlined the ASM5015 procedure to pass as quickly as possible a vehicle which meets the applicable emission standards and to limit the maximum amount of time required to test a vehicle which exceeds the standards. That is, the stabilization period has been shortened from 30 to 25 seconds, and the vehicle will have “fast-passed” the test if its emissions meet the applicable standards between 25 and 90 seconds. The vehicle currently would have a full 76 seconds (106 seconds minus the 30 seconds of stabilization) to demonstrate a passing emissions level; the Department has found that these addition 12 seconds (the proposed testing period is 90 seconds minus the 25 seconds of stabilization, or 65 seconds) do not significantly increase the likelihood that a vehicle which has not already passed the test will do so, and unnecessarily prolongs the test.

7:27B-4.7 Procedures for the IM240 test

The EPA technical guidance document set forth and incorporated by reference at N.J.A.C. 7:27B-4.7(b)2 is no longer the most current technical guidance document

regarding the IM240 and evaporative emissions tests available from the EPA. Its successor, entitled IM240 and Evap Technical Guidance, incorporates changes discussed by the EPA and I/M stakeholders since June 1996, and thus includes the latest standards and procedures recommended for IM240 testing. Accordingly, the Department proposes to replace the reference to EPA-AA-RSPD-IM-96-1, entitled High-Tech IM Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, with a reference to EPA420-R-98-010, entitled IM240 and Evap Technical Guidance.

It should be noted, however, that since the State employs the IM240 only for program evaluation purposes, it only employs certain elements of the full IM240 test. That is, it does not employ the fast-pass, fast-fail provisions, to which most of the changes to the procedures in the new guidance document apply. The elements of the IM240 test used by New Jersey are not changed from the previous guidance document.

7:27B-4.9 Procedures for the evaporative pressure test

The EPA technical guidance document set forth and incorporated by reference at N.J.A.C. 7:27B-4.9(a)2 is no longer the most current technical guidance document regarding the IM240 and evaporative emissions tests available from the EPA. Its successor, entitled IM240 and Evap Technical Guidance, incorporates changes discussed by the EPA and I/M stakeholders since June 1996, and thus includes the latest standards and procedures recommended for evaporative pressure testing. Accordingly, the Department proposes to replace the reference to EPA-AA-RSPD-IM-96-1, entitled High-Tech IM Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, with a reference to EPA420-R-98-010, entitled IM240 and Evap Technical Guidance.

The current EPA technical guidance document does not change the pass-fail standards for the evaporative pressure test, but it does increase the flexibility of this testing, by providing a variety of testing methods which may be employed in place of the single measuring technique available under the previous technical support document. Thus, there are no additional requirements imposed by the incorporation by reference of

this document in lieu of its predecessor, only greater flexibility available to both the official inspection facilities and the private inspection facilities.

7:27B-4.10 Procedures for the evaporative purge test

As is discussed above, the Department proposes to delete this section until such time as the EPA develops procedures for the evaporative system purge test appropriate to the State's enhanced I/M program.

7:27B-4.12 Procedures for the fuel cap leak test

The EPA has incorporated its recommended procedures for the fuel cap leak test into a technical guidance document. Since the EPA's procedures are essentially identical to the procedures previously promulgated by the Department at N.J.A.C. 7:27B-4.12, and since equipment manufacturers are universally reflecting the EPA's procedures in their fuel cap testing equipment, the Department proposes revising the test procedures at N.J.A.C. 7:27B-4.12 to reference the EPA guidance document for the fuel cap leak test.

7:27B-4.14 Specifications for motor vehicle emission testing equipment for use in the New Jersey Enhanced Inspection and Maintenance Program

As is explained above, as the result of its rulemaking in 1997 related to the diesel I/M program, the Department made certain changes to the codification of sections in N.J.A.C. 7:27B-4, not all of which were correctly reflected in other sections of N.J.A.C. 7:27B-4 and N.J.A.C. 7:27-15 which referenced the recodified sections. Specifically, the Department repealed N.J.A.C. 7:27B-4.4, when it adopted at N.J.A.C. 7:27B-4.3 new diesel test procedures for heavy-duty diesel vehicles and diesel buses to determine compliance with the peak smoke opacity standards set forth at N.J.A.C. 7:27-14.6. These new procedures replaced those which had been codified at N.J.A.C. 7:27B-4.3 and 4-4. Accordingly, the Department repealed N.J.A.C. 7:27B-4.4 and recodified N.J.A.C. 7:27B-4.5 through N.J.A.C. 7:27B-4.13 as N.J.A.C. 7:27B-4.4 through N.J.A.C. 7:27B-4.12. Through an oversight, the Department neglected to reflect these changes in those sections of N.J.A.C. 7:27-15 and N.J.A.C. 7:27B-4 which regulate the testing of gasoline-fueled motor vehicles. The Department proposes to correct the remaining incorrect references

at N.J.A.C. 7:27B-4.14(a), (b), (c), (d), and (e). In addition, the Department proposes certain stylistic changes to N.J.A.C. 7:27B-4.14(a), (b), and (c) to improve the clarity of these provisions.

Finally, the EPA technical guidance document set forth and incorporated by reference at N.J.A.C. 7:27B-4.14(c)2 and (d)2 is no longer the most current technical guidance document regarding the IM240 and evaporative emissions tests available from the EPA. Its successor, entitled IM240 and Evap Technical Guidance, incorporates changes discussed by the EPA and I/M stakeholders since June 1996, and thus includes the latest standards and procedures recommended for enhanced I/M program testing equipment. Accordingly, the Department proposes to replace the reference to EPA-AA-RSPD-IM-96-1, entitled High-Tech IM Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, with a reference to EPA420-R-98-010, entitled IM240 and Evap Technical Guidance. It should be noted however, that the changes regarding equipment specifications are minor in nature and do not require the purchase of different or more expensive equipment than that which would have met the specifications set forth in the predecessor technical guidance document.

Social Impact

The Department is proposing these amendments to update and modify the enhanced I/M program design. By thus furthering the overall goals of this important air quality program, these proposed amendments will have a positive social impact.

The enhanced I/M program was designed to aid the State in attaining and maintaining the NAAQS for ozone and CO by reducing the in-use emissions of air contaminants from gasoline-fueled motor vehicles. Motor vehicle emissions contain volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) which, in the presence of sunlight, react with other compounds in the ambient air to form ozone and other oxidants harmful to health. Motor vehicles are also significant contributors of CO.

Ground level ozone is a major public health problem in New Jersey. Studies have proven that ozone, a known respiratory irritant, has severe and debilitating effects on lung capacity and can have detrimental effects on respiration. Even at low levels, ozone can cause average humans to experience breathing difficulty, chest pains, coughing and irritation to the nose, throat and eyes. For individuals who already experience respiratory problems or who are predisposed to respiratory ailments, these symptoms can become much more severe, forcing those individuals to alter their lifestyles to avoid unnecessary exposure. In addition, chronic ozone exposure studies performed on laboratory animals indicate that long-term exposure to ozone affects lung physiology and morphology. These studies suggest that humans exposed to ozone over prolonged periods of time can experience chronic respiratory injuries resulting in premature or accelerated aging of human lung tissue.

In addition to their participation in the formation of ozone, VOCs and NO_x by themselves exhibit serious human health effects. For example, some VOCs, including benzene, formaldehyde and 1,3-butadiene, are classified as air toxics. They have been associated with the onset of cancer and other adverse health effects. As for NOx, although nitric oxide (NO) itself is a relatively nonirritating gas, it is readily oxidized to nitrogen dioxide (NO_2), which can damage respiratory defense mechanisms, allowing bacteria to proliferate and invade the lung tissue. NO_x cause irritation to the lungs, lower resistance to respiratory infections, and contribute to the development of emphysema, bronchitis, and pneumonia. NO_x also react chemically in the air to form nitric acid, which contributes to acid rain formation.

Carbon monoxide is a poisonous gas at certain threshold levels. It is absorbed into the bloodstream and may have both direct and indirect effects on the cardiovascular system by interfering with the oxygen-carrying ability of the blood. Exposure to CO aggravates angina and other aspects of coronary heart disease and decreases exercise tolerance in persons with cardiovascular problems. In fetuses, infants, elderly persons, and individuals with respiratory diseases, elevated levels of CO are also a serious health risk.

Though manufacturers of motor vehicles and fuel refiners have progressively reduced the emissions of air contaminants from motor vehicles, these emissions still represent 27 percent of the VOCs and 38 percent of the NO_x emissions (both of which contribute to the formation of ambient ozone), as well as 66 percent of the carbon monoxide released into New Jersey's air. Motor vehicles are also a major contributor to the toxics, such as benzene, present in the atmosphere and known as air toxics.

As discussed in the Department's May 6, 1996, proposal at 28 N.J.R. 2298, the Department cannot definitively quantify the air quality benefits of the enhanced I/M program until after completion of the evaluation required of this program. However, the Department has evaluated the possible social impacts associated with the implementation of an enhanced I/M program in New Jersey and has determined that overall such a program would have a beneficial and positive impact on the State's residents by providing them with cleaner air and thus a healthier environment. A fuller discussion of the social impact of the enhanced I/M program was provided by the Department in its July 17, 1995 proposal at 27 N.J.R. 2752(a).

Economic Impact

The Department is proposing these amendments to modify and make corrections to the enhanced I/M program rules so that they conform to and accurately reflect the current program design. Again, by furthering the overall goals of this program, these proposed amendments will have a positive economic impact in that the resulting air quality benefits from the implementation of the enhanced I/M program will reduce the substantial cost to the State and its citizens associated with air pollution. These costs include health care costs and the cost of damage to buildings, materials, crops and vegetation. In addition, by complying with federal air quality standards, the State will be able to avoid the significant adverse economic impact of federal sanctions. There will be some economic benefit from some of the proposed amendments insofar as they delay certain requirements of the program. For example, by delaying the final emission standards and the OBD testing requirements by two years, the proposed amendments have a positive economic impact because motorists will not have to make repairs which failing these standards and

tests would have otherwise entailed. On the other hand, had these failing vehicles been required to make these repairs, there would have been an economic benefit flowing from the lowered emissions resulting from the repairs.

While there is no cost associated with the proposed amendments, there is a cost associated with the overall enhanced inspection and maintenance program. A detailed discussion of the economic impact of the various components of the enhanced I/M program including facility upgrades, emission testing equipment, on-road testing, remote sensing, biennial inspection frequency, increased motor vehicle repair costs, the repair cost waiver program, automobile repair technician training programs, as well as the economic impact the enhanced I/M program will have on State government resources and the repair industry, is included in the Economic Impact Statement accompanying the July 17, 1995 emergency adoption/concurrent proposal of the enhanced I/M rules. (See 27 N.J.R. 2752(a).)

The enhanced I/M program will also have a very substantial, albeit indirect, benefit by decreasing health costs to the public. Health care costs for air pollution-related illnesses in the United States are estimated to be on the order of $50 billion per year. In addition, the American Lung Association estimates that, nationally, 182 million people face health threats from ground-level ozone alone. By decreasing the public's exposure to ozone, VOCs, NOx, CO, and air toxics, these amendments and new rules will lessen these health care costs.

Air pollutants also have a direct adverse effect on vegetation, livestock, and certain materials, such as rubber and glass. Although economic losses due to air pollution damage in these areas are difficult to quantify (since it is difficult to distinguish between natural deterioration and that which is caused by air pollutants), past estimates have indicated that losses from material damage alone have exceeded $4 billion annually nationwide. Godish, Thad. Air Quality (Chelsea, Michigan: Lewis Publishers, Inc., 1991), p.207. The enhanced I/M program, by reducing air pollutants, should substantially reduce the adverse economic effects on vegetation, livestock, and other property.

Environmental Impact

By furthering the overall goals of the enhanced I/M program, these proposed amendments will have a positive environmental impact in that they advance the positive environmental impact of the program as a whole, described herein. Full implementation of the enhanced I/M program is expected to reduce the emissions of VOCs and NO_x from gasoline-fueled motor vehicles, thereby reducing the formation of ground-level ozone. It will also result in reduced motor vehicle emissions of CO. However, as was stated in the Social Impact Statement above, the Department cannot at this time definitively quantify the air quality benefits of this proposal until after an evaluation of the program is completed by the State. Nevertheless, the Department expects that the environmental effect of these proposed amendments to the enhanced I/M program as a whole to be positive.

The impact of ground-level ozone and CO is primarily upon human health and well-being. These effects are discussed at length in the Social Impact section of this proposal. In addition to human health effects, studies have shown that increased ozone levels damage foliage. One of the earliest and most obvious manifestations of ozone impact on the environment is this type of damage to sensitive plants. Subsequent effects include reduced plant growth and decreased crop yield. A reduction in ambient ozone concentrations will mitigate damage to foliage, fruits, vegetables and grain.

Decreased ozone levels will also result in less degradation of various man-made materials, such as rubber, plastics, dyes and paints. This degradation is caused by the oxidizing properties of ozone. However, if the photochemical production of ground-level ozone can be limited, as it will be with the implementation of the proposed amendments and new rules, this degradation will be significantly reduced.

Although ozone is well-known for its damaging effects on the environment, NO_x can also independently cause significant environmental degradation. Oxides of nitrogen are the primary constituents involved in the deposition of toxics, commonly referred to as acid rain, into lakes and coastal waters. Acid rain damages plants and trees, and injures aquatic life by acidifying lakes and streams. The enhanced I/M program is designed to decrease emissions of NO_x into the atmosphere and benefit the environment of New Jersey.

Because VOCs and NO_x are precursors to ozone formation, efforts to attain and maintain the NAAQS for ozone have focused on reducing VOC and NO_x emissions. In 1990, VOC emissions in New Jersey averaged 1,776 tons per summer weekday with 474 tons attributed to emissions from all mobile sources. The enhanced I/M program is expected to reduce VOC emissions by 187 tons per day in the year 2000. In 1990, NO_x emissions in New Jersey averaged 1,511 tons per summer weekday with 570 tons per summer weekday attributed to emissions from all mobile sources. The enhanced I/M program is expected to reduce NO_x emissions by 52 tons per day.

CO is generally a localized wintertime pollutant, elevated levels of which are related to colder temperatures and congested traffic. In 1990, CO emissions in New Jersey totaled 4,450 tons per winter weekday, with 2,952 tons per winter weekday attributed to all mobile sources. The performance standard design is expected to reduce CO emissions by 1,275 tons per day in the year 2001.

It is anticipated that additional mobile source emission reductions from the existing New Jersey basic I/M program will be the following for an enhanced I/M program which achieves the same reductions as the EPA's model performance standard: for the year 2000, 27.2 percent for VOCs and 10.8 percent for NO_x, and, for the year 2001, 23.7 percent for CO.

A fuller discussion of the environmental impact of the enhanced I/M program was provided by the Department in its July 17, 1995 proposal at 27 N.J.R. 2752(a).

Jobs Impact Statement

While the proposed amendments themselves should have no economic impact, as was discussed above in the Economic Impact Statement, full implementation of the enhanced I/M program will result in economic benefit by further reducing the substantial cost to the State and its citizens associated with air pollution. However, each affected entity may well choose its own approach or combination of approaches to use this economic benefit.

The private inspection facilities might invest in equipment, or improve their facilities, or hire additional workers. Motorists and other citizens could spend the money which this economic benefit may represent in any of a multitude of ways, impacting on jobs to the extent that the spending of these funds increases the demand for services and thus leads to increased hiring by service companies. Companies with large motor vehicle fleets face similar options, which also include hiring additional workers.

Because all who may be affected by these savings or costs may respond in a different way, it is not possible to estimate accurately the extent, if any, to which these proposed amendments will affect employment in New Jersey.

Comparison with Federal Law

The proposed changes to the Department's rules do not modify the program design so as to in any way impose standards or requirements that exceed those contained in the current version of these rules. To the extent the program design imposes standards or requirements that exceed those contained in Federal law, a comparison with federal Law was provided at 27 N.J.R. 2752(a).) Accordingly, neither Executive Order 27 (1994) nor N.J.S.A. 52:14B-23 requires a cost-benefit analysis.

Agriculture Industry Impact

Pursuant to P.L. 1998, c. 48, adopted on July 2, 1998, the Department has evaluated this rulemaking to determine the nature and extent of the proposed amendments' impact on the agriculture industry. The proposed amendments, regarding the inspection and maintenance of gasoline-fueled motor vehicles, will have no impact upon the agriculture industry.

Regulatory Flexibility Analysis

In accordance with the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has determined that the proposed amendments will not impose additional reporting or recordkeeping requirements on small businesses, (defined in the Regulatory Flexibility Act as those with fewer than 100 employees). The proposed

amendments are mostly of a clerical nature, with the exception of the 2-year delays in the imposition of the final standards and the implementation of OBD testing and the reserving of the purge test requirements, and the addition of second chance testing for a number of the emissions tests. None of the substantive changes proposed would impose additional reporting or recordkeeping requirements or additional compliance requirements on small businesses, including small businesses which choose to be licensed as private inspection facilities, other than the requirement that they add the second chance mode to the idle test, and the 2500 RPM test, as set forth at N.J.A.C. 7:27B-4.4(b)3, and N.J.A.C. 7:27B-4.5(a)6. Because adding a second chance mode to either the idle test or the 2500 RPM test will add less than a minute or two to the test, (and only for those vehicles which failed the test on their first try), there are no capital costs involved, nor any other additional resource needs for compliance with these requirements. In any event, to exempt small businesses from this requirement would mean that marginally non-compliant vehicles would not get a second chance to pass at these small business facilities, which would make testing at these facilities less attractive and would conceivably mean a loss of business to the facilities. This result would presumably not be welcomed by the owner of such a facility.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets **[**thus**]**):

7:27-15.5 Motor vehicle inspections

(a) - (e) (No change.)

(f) A motor vehicle inspection shall include the following:

1. A visible smoke test conducted in accordance with N.J.A.C. 7:27B- 4.4(a);

2. (No change.)

3. For **an LDGV, LDGT or HDGV of model year 1975 or later**, an emission control apparatus compliance examination conducted in accordance with N.J.A.C.7:27B-**[**4.9**] 4.8**;

4. **[**Twelve months after the EPA's interim approval of the Enhanced I/M State Implementation Plan Revision, for all post-1980 model year LDGVs and LDGTs**] For an LDGV or LDGT of model year 1981 or later** originally equipped with an evaporative emission control system, an evaporative pressure test utilizing motor vehicle emission testing equipment approved by the Department and conducted in accordance with N.J.A.C. 7:27B-**[**4.10**] 4.9**;

5. **[**Twelve months after the EPA's interim approval of the Enhanced I/M State Implementation Plan Revision, for all post-1980 model year LDGVs and LDGTs originally equipped with an evaporative emission control system, an evaporative purge test utilizing motor vehicle emission testing equipment approved by the Department and conducted in accordance with N.J.A.C. 7:27B-4.11, except that those motor vehicles that, in accordance with (g) below, are subject to only the 2500 RPM test as their sole exhaust emission test, shall not be subject to an evaporative purge test**] (Reserved)**;

6. For **[**all LDGVs, LDGTs and HDGVs**] an LDGV, LDGT or HDGV** originally equipped with a sealed fuel filler cap (that is, not a directly vented fuel filler cap), not otherwise subject to an evaporative pressure test pursuant to (f)4 **[**,**]** above, a fuel cap leak

test utilizing motor vehicle emission testing equipment approved by the Department and conducted in accordance with N.J.A.C. 7:27B-**[**4.13**]** **4.12**;

7. On and after January 1, **[**1998**]** **2001**, for **[**all post-1995 LDGVs and LDGTs**]** **an LDGV or LDGT of model year 1996 or later**, an on-board diagnostics test conducted in accordance with N.J.A.C. 7:27B-**[**4.12**]** **4.11**; and

8. (No change.)

(g) The exhaust emission test to be used pursuant to (f)2 above shall be determined as follows:

1. Except as specified in (g)2 and 3 below, the exhaust emission test procedure to be used shall be as follows:

i. For **a motor vehicle of** model year 1980 **[**and older motor vehicle**]** **or earlier**, the exhaust emission test procedure to be used shall be the idle test set forth at N.J.A.C. 7:27B-**[**4.5(b)**]** **4.4(b); and**

ii. For **a motor vehicle of** model year 1981 **[**and newer motor vehicle**]** **or later**, the exhaust emission test procedure to be used **[**12 months after the EPA's interim approval of the Enhanced I/M State Implementation Plan Revision**]** shall be the ASM5015 test set forth at N.J.A.C. 7:27B-**[**4.7**]** **4.6**, except that an inspection performed at a PIF may utilize the IM240 test set forth at N.J.A.C. 7:27B-**[**4.8**]** **4.7** **[**; and

iii. For model year 1981 motor vehicles, the exhaust emission test procedure to be used until twelve months after the EPA's interim approval of the Enhanced I/M State Implementation Plan Revision shall be the idle test set forth at N.J.A.C. 7:27B-4.5(b)**]**.

2. Notwithstanding the provision of (g)1 above, if the motor vehicle has a GVWR in excess of 8,500 pounds, the exhaust emission test procedure to be used shall be the idle test set forth at N.J.A.C. 7:27B-**[**4.5(b)**]** **4.4(b)**.

3. Notwithstanding the provision of (g)1 above, if the motor vehicle is **[**any**]** **either** of the following types, the exhaust emission test procedure to be used **[**twelve

months after the EPA's interim approval of the Enhanced I/M State Implementation Plan Revision**]** shall be the 2500 RPM test set forth at N.J.A.C. 7:27B-**[**4.6**]** **4.5**:

i. **[**Motor vehicles**]** **A motor vehicle** of model year 1981 **[**and newer**]** **or later** that employ**s** **either** full-time four-wheel drive **or non-disengageable traction control**; or

ii. **[**Low**]** **A low** mileage vehicle**[**s**]** of model year 1981 **[**and newer**]** **or later**.

(h) (No change.)

(i) An on-road inspection conducted pursuant to N.J.A.C. 13:20-43.14 may include the following:

1. A visible smoke test conducted in accordance with N.J.A.C. 7:27B-**[**4.5(a)**]** **4.4(a)**;

2. Unless the motor vehicle is exempt pursuant to N.J.A.C. 7:27-15.6(e) or (f), an idle test utilizing motor vehicle emission testing equipment approved by the Department and conducted in accordance with N.J.A.C. 7:27B-**[**4.5(b)**]** **4.4(b)**;

3. For **[**all post-1974 model year LDGVs, LDGTs and HDGVs**]** **an LDGV, LDGT or HDGV of model year 1975 or later**, an emission control apparatus compliance examination conducted in accordance with N.J.A.C. 7:27B-**[**4.9**]** **4.8**;

4. **[**Twelve months after the EPA's interim approval of the Enhanced I/M State Implementation Plan Revision, for all post-1980 model year LDGVs and LDGTs**]** **For an LDGV or LDGT of model year 1981 or later,** originally equipped with an evaporative emission control system, unless the motor vehicle is exempt pursuant to N.J.A.C. 7:27-15.6(e) or (f), an evaporative pressure test utilizing motor vehicle emission testing equipment approved by the Department and conducted in accordance with N.J.A.C. 7:27B-**[**4.10**]** **4.9**; and

5. (No change.)

(j)-(k) (No change.)

(l) Each year DMV shall conduct a program evaluation test which shall entail additional testing for at least 0.1 percent of those motor vehicles subject to inspection during that year. The motor vehicles subject to the program evaluation testing shall be selected by the DMV in accordance with its procedures. The program evaluation test shall consist of **[**two**]** **one or more** IM240 tests performed in accordance with N.J.A.C. 7:27B-**[**4.8**]** **4.7**. The program evaluation test shall be performed after, and in addition to, any other inspection procedures required pursuant to this section. The results of the program evaluation test shall not be used in determining whether a motor vehicle has passed or failed its motor vehicle inspection with regard to exhaust emissions.

7:27-15.6 Motor vehicle inspection standards

(a) Any light-duty gasoline-fueled vehicle, light-duty gasoline-fueled truck or heavy-duty gasoline-fueled vehicle shall not emit visible smoke in the exhaust emissions or in the crankcase emissions for a period in excess of three consecutive seconds when measured using the test procedure established at N.J.A.C. 7:27B-**[**4.5**]** **4.4(a)**.

(b) Any light-duty gasoline-fueled vehicle, light-duty gasoline-fueled truck or heavy-duty gasoline-fueled vehicle shall not emit carbon monoxide (CO), hydrocarbons (HC), or oxides of nitrogen (NO_x) in the exhaust emissions in excess of the following standards:

1. If, pursuant to the provisions of N.J.A.C. 7:27-15.5(g), a motor vehicle is tested using the idle test, the motor vehicle shall be subject to the exhaust emission standards set forth in Table 1 below. Compliance with these standards shall be determined in accordance with the inspection test procedure at N.J.A.C. 7:27B-**[**4.5**]** **4.4(b)**;

TABLE 1 (No change.)

2. If, pursuant to the provisions of N.J.A.C. 7:27-15.5(g), a motor vehicle is tested using the 2500 RPM test, the motor vehicle shall be subject to the applicable

exhaust emission standards set forth in Table 2 below. Compliance with these standards shall be determined in accordance with the inspection test procedure at N.J.A.C. 7:27B-**[**4.6**]** **4.5**;

3. If, pursuant to the provisions of N.J.A.C. 7:27-15.5(g), a motor vehicle is tested using the ASM5015 test, the motor vehicle shall be subject to the applicable exhaust emission standards set forth in Table 3 below. Compliance with these standards shall be determined in accordance with the inspection test procedure at N.J.A.C. 7:27B-**[**4.7**]** **4.6**; or

4. If, pursuant to the provisions of N.J.A.C. 7:27-15.5(g), a motor vehicle is tested using the IM240 test, the motor vehicle shall be subject to the applicable exhaust emission standards set forth in Table 4 below. Compliance with these standards shall be determined in accordance with the inspection test procedure at N.J.A.C. 7:27B-**[**4.8**]** **4.7**.

TABLE 2 (No change.)

TABLE 3

EXHAUST EMISSION STANDARDS
FOR THE ASM5015 TEST

LDGVs Powered by Gasoline
(Effective through December 31, **[**1999**]** **2001**)

• • •

LDGVs Powered by a Fuel Other Than Gasoline
(Effective through December 31, **[**1999**]** **2001**)
(Reserved)

• • •

LDGT1s Powered by Gasoline
(Effective through December 31, **[**1999**]** **2001**)

• • •

LDGT1s Powered by a Fuel Other Than Gasoline

(Effective through December 31, **[**1999**]** **2001**)

(Reserved)

LDGT2s Powered by Gasoline

(Effective through December 31, **[**1999**]** **2001**)

• • •

LDGT2s Powered by a Fuel Other Than Gasoline

(Effective through December 31, **[**1999**]** **2001**)

(Reserved)

LDGVs Powered by Gasoline

(Effective January 1, **[**2000**]** **2002**)

• • •

LDGVs Powered by a Fuel Other Than Gasoline

(Effective January 1, **[**2000**]** **2002**)

(Reserved)

LDGT1s Powered by Gasoline

(Effective January 1, **[**2000**]** **2002**)

• • •

LDGT1s Powered by a Fuel Other Than Gasoline

(Effective January 1, **[**2000**]** **2002**)

(Reserved)

LDGT2s Powered by Gasoline

(Effective January 1, **[**2000**]** **2002**)

• • •

TABLE 4

EXHAUST EMISSION STANDARDS

FOR THE IM240 TEST

LDGVs Powered by Gasoline

(effective through December 31, **[**1999**]** **2001**)

• • •

LDGVs Powered by a Fuel Other Than Gasoline

(effective through December 31, **[**1999**]** **2001**)

(Reserved)

LDGT1s Powered by Gasoline

(effective through December 31, **[**1999**]** **2001**)

• • •

LDGT1s Powered by a Fuel Other Than Gasoline

(effective through December 31, **[**1999**]** **2001**)

(Reserved)

LDGT2s Powered by Gasoline

(effective through December 31, **[**1999**]** **2001**)

• • •

LDGT2s Powered by a Fuel Other Than Gasoline

(effective through December 31, **[**1999**]** **2001**)

(Reserved)

LDGVs Powered by Gasoline

(effective January 1, **[**2000**]** **2002**)

• • •

LDGVs Powered by a Fuel Other Than Gasoline

(effective January 1, **[**2000**]** **2002**)

(Reserved)

LDGT1s Powered by Gasoline

(effective January 1, **[**2000**]** **2002**)

• • •

LDGT1s Powered by a Fuel Other Than Gasoline

(effective January 1, **[**2000**]** **2002**)

(Reserved)

LDGT2s Powered by Gasoline

(effective January 1, **[**2000**]** **2002**)

• • •

LDGT2s Powered by a Fuel Other Than Gasoline

(effective January 1, **[**2000**]** **2002**)

(Reserved)

TABLE 5 (No change.)

(c) A gasoline-fueled motor vehicle which is subject to inspection pursuant to N.J.A.C. 7:27-15.5(a) shall, as a condition of compliance with said inspection, have properly functioning and properly maintained emission control apparatus as determined according to the inspection test procedures established at N.J.A.C. 7:27B- **4.8,** 4.9, 4.10, 4.11**[**,**]** **and** 4.12 **[**and 4.13**]**.

(d) Except as provided in (e) and (f) below, the applicability of the standards set forth in this subchapter and of the test procedures set forth at N.J.A.C. 7:27B-**4.4**,4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11**[**,**]** **and** 4.12 **[**and 4.13**]** to a motor vehicle with an engine other than the engine originally installed by the manufacturer shall be based on the chassis type and model year of the motor vehicle, not on the engine model year.

(e) - (g) (No change.)

SUBCHAPTER 4. AIR TEST METHOD 4: TESTING PROCEDURES FOR MOTOR VEHICLES

7:27B-4.1 Definitions

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise.

. . .

"Inspector" means any person authorized by the State of New Jersey to determine whether a vehicle complies with the requirements of N.J.A.C. 7:27-14 **or 15**.

. . .

7:27B-4.2 General instructions for all tests

(a) **[**The**]** **An inspector conducting an emissions test on a diesel-powered motor vehicle pursuant to any provision of this subchapter including, but not limited to N.J.A.C. 7:27B-4.3, 4.8(d) and 4.8(e), shall perform the test in accordance with the following** general procedures **[**which must be carried out in order for an emissions test conducted pursuant to any provision of this subchapter to be valid are as follows**]**:

1. **[**Prior to conducting an emissions test pursuant to this subchapter, ensure that the equipment is calibrated by checking and, if necessary, adjusting zero and span settings **] Test the vehicle in as-received condition**;

2. (No change.)

3. **[**When**] Prior to** testing **[**a heavy-duty diesel vehicle**]**, **[**bring**] ensure that** the engine **[**to**] is at** normal operating temperature by operating the vehicle on a highway or a chassis dynamometer with a road load for a minimum of 15 minutes. For testing at a DEIC, only, confirm proper engine operating temperature by inserting an oil temperature probe through the oil dipstick tube into the crankcase oil, so that the oil temperature as measured during the test will be recorded as part of the analyzer printout at the conclusion of the test. Oil temperature shall be at least 70 degrees Celsius (160 degrees Fahrenheit), and water temperature shall be at least 82 degrees Celsius (180 degrees Fahrenheit) but not overheating.

4. - 6. (No change.)

7. **[**Before initiating the test**]** **Prior to testing**, turn off **[**all accessories and**]** the engine brake **and all vehicle accessories, including, but not limited to, air conditioning, heating, defroster, radio and lights**;

8. - 12. (No change.)

(b) An inspector, conducting an emissions test on a gasoline-fueled motor vehicle pursuant to any provision of this subchapter, including, but not limited to, N.J.A.C. 7:27B-4.4, 4.5, 4.6, 4.7, 4.8(a), (b) and (c), 4.9, 4.10, 4.11 and 4.12, shall perform the test in accordance with the following general procedures:

1. Test the vehicle in as-received condition without making any repairs immediately prior to testing;

2. Prior to testing, turn off all vehicle accessories, including, but not limited to, air conditioning, heating, defroster, radio and lights;

3. Prior to testing, ensure that the motor vehicle emission testing equipment is calibrated and warmed-up in accordance with the manufacturer's requirements;

4. Prior to testing, ensure that the vehicle is at normal operating temperature by doing one of the following:

i. Check the vehicle's engine coolant temperature gauge and the vehicle's engine oil temperature gauge to confirm that the vehicle is at a normal operating temperature, as indicated by the gauges; that is, that engine coolant temperature is in the "normal" range as specified by the vehicle manufacturer, or, if the "normal" range is not specified by the vehicle manufacturer, is at least 70 degrees Celsius (160 degrees Fahrenheit) and that engine oil temperature is at least 80 degrees Celsius (175 degrees Fahrenheit). If there is no oil temperature gauge, insert a

temperature probe through the oil dip stick tube and into the engine oil to confirm normal operating temperature;

ii. Operate the vehicle on the road, or on a chassis dynamometer under road load, at speeds above 35 MPH for at least 20 minutes; or

iii. Operate the vehicle on a chassis dynamometer under the ASM5015 load appropriate for the vehicle, for at least 10 minutes;

5. Discontinue testing any vehicle in an overheated condition, as indicated by a temperature gauge or warning light, or boiling of engine coolant;

6. If the vehicle has two tailpipes, determine whether they are functionally independent. If they are functionally independent, collect exhaust samples from both tailpipes simultaneously; if they are not functionally independent, collect exhaust samples from either tailpipe;

7. When prompted by the motor vehicle emission testing equipment, insert the exhaust sampling probe into the vehicle's tailpipe, using a tailpipe extension if necessary, to an insertion depth of at least ten inches and collect exhaust gases from each tailpipe of a functionally independent exhaust system; and

8. If using a chassis dynamometer, ensure that the air pressure of each of the vehicle's drive wheel tires is in accordance with the recommendation of the motor vehicle manufacturer; or, if such a recommendation is not available, in accordance with the pressure recommendations on the tire sidewall; if not in accordance, inflate or deflate the drive wheel tires, as appropriate.

[(b)**] (c) (No change in text.)**

(d) Equipment to be used in conducting an emissions test on a gasoline-fueled motor vehicle in accordance with N.J.A.C. 7:27-15.5 shall satisfy all specifications and standards for motor vehicle testing equipment as set forth in N.J.A.C. 7:27B-4.14.

[(c)**]** **(e)** **[**Any equipment to be used in**]** **An inspector** conducting a motor vehicle emissions test **on either a diesel-powered motor vehicle or a gasoline-fueled motor vehicle** as set forth in this subchapter shall **[**first be**]** **use only motor vehicle emission testing equipment that has been** approved by the Department **prior to its use in the test**. Approval **[**of testing equipment shall be based on the determination**]** by the Department **[**of**]** **is based on** the following **criteria**:

1. - 4. (No change.)

[(d)**]** **(f)** The Department **maintains a list of approved equipment for specific test procedures. The Department** shall periodically review and evaluate equipment offered by manufacturers of motor vehicle testing equipment of which it is aware or has been made aware and **[**make available a list of approved equipment for specific test procedures**]** **and update this list**. A copy of this list can be obtained from **[**the Bureau of Transportation Control in the Department of Environmental Protection.**]** **:**

New Jersey Department of Environmental Protection
Bureau of Transportation Control
P.O. Box 437
Trenton, N.J. 08625-0437

7:27B-4.4 Procedures for the visible smoke test and the idle test for gasoline-fueled motor vehicles

(a) **[**The testing procedure for the**]** **An inspector conducting a** visible smoke test **[**,**]** to **[**be used to**]** determine a gasoline-fueled motor vehicle's compliance with the standard set forth at N.J.A.C. 7:27-15.6(a) shall **[**be performed**]** **perform the test** as follows:

1. **[**The**]** **Place the** vehicle **[**shall be placed**]** in neutral gear with all accessories off and the emergency or parking brake secured;

2. **[**The**]** **Increase the** engine speed **[**shall be increased**]** to an engine speed greater than the idle mode, and **observe** the exhaust emissions and crankcase emissions **[**observed**]** for visible continuous smoke; **[**and**]**

3. If there is visible smoke in the exhaust emissions or crankcase emissions for a period in excess of three consecutive seconds, the motor vehicle **[**shall be determined to fail**]** **has failed** the smoke test **[**.**]** **; and**

4. If there is no visible smoke in the exhaust emissions or crankcase emissions for a period in excess of three consecutive seconds, the motor vehicle has passed the smoke test.

(b) **[**The testing procedure to be used**]** **An inspector conducting an idle test** to determine a **gasoline-fueled** motor vehicle's compliance with the exhaust emission standards set forth at N.J.A.C. 7:27-15.6(b)1 **[**is the idle test and**]** shall **[**be performed**]** **perform the test** as follows:

[1. The engine shall be at normal operating temperature and not overheating (as determined by the vehicle's temperature gauge or temperature warning light, a boiling radiator, or other visual observation) with all accessories off;**]**

[2.**]** **1.** With the engine operating at idle and transmission in neutral, **insert** the sample probe **[**shall be inserted**]** at least 10 inches into the **[**exhaust outlet**]** **tailpipe**. If the motor vehicle's exhaust system prevents insertion to this depth, **use** a tailpipe extension **[**shall be used**]**. For motor vehicles equipped with multiple **[**exhaust pipes**]** **tailpipes**, **take** exhaust gas measurements **[**shall be taken**]** from all **[**exhaust pipes**]** **tailpipes** simultaneously;

[3.**]** **2.** **[**The**]** **Measure the** exhaust concentrations **[**shall be measured**]** as percent carbon monoxide and parts per million hydrocarbons after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first; **[**and**]**

3. If the percent carbon monoxide or parts per million hydrocarbons recorded in (b)2 above exceeds the applicable standards specified in Table 1 at N.J.A.C. 7:27-15.6, increase the vehicle's engine speed to between 2200 and 2800 RPM for a period of 30 seconds. Allow the vehicle's engine speed to return to idle and then repeat the exhaust concentration measurement as in (b)2 above;

4. If the percent carbon monoxide or parts per million hydrocarbons recorded in (b)3 above exceeds the applicable standards specified in Table 1 at N.J.A.C. 7:27-15.6, the motor vehicle **[**shall be determined to have**]** **has** failed **[**(that is, not passed)**]** the idle test **[**.**]** **; and**

5. If the percent carbon monoxide or parts per million hydrocarbons recorded in (b)2 or 3 above does not exceed the applicable standards specified in Table 1 at N.J.A.C. 7:27-15.6, the motor vehicle has passed the idle test.

7:27B-4.5 Procedures for the 2,500 RPM test

(a) **[**The testing procedure for the**]** **An inspector conducting a** 2,500 RPM test, **[**to be used**]** to determine a **gasoline-fueled** motor vehicle's compliance with the exhaust emission standards set forth at N.J.A.C. 7:27-15.6(b)2, shall **[**be performed**]** **perform the test** as follows:

[1. The motor vehicle shall be tested in as-received condition with all accessories off. Its engine shall be at normal operating temperature and not overheating (as determined by the vehicle's temperature gauge or temperature warning light, a boiling radiator, or other visual observation);**]**

[2.**]** **1.** **[**The**]** **Insert the** sample probe **[**shall be inserted**]** into the motor vehicle's tailpipe to a minimum depth of 10 inches. If the motor vehicle's exhaust system prevents insertion to this depth, **use** a tailpipe extension **[**shall be used**]**. For motor vehicles equipped with multiple **[**exhaust pipes**]** **tailpipes**, **take** exhaust gas measurements **[**shall be taken**]** from all **[**exhaust pipes**]** **tailpipes** simultaneously;

[3.**]** **2.** For **[**all pre-1996**]** **a motor vehicle of** model year **[**vehicles**]** **1995 or earlier**, **use** a tachometer or other device approved by the Department **[**shall be used**]** to measure engine speed. **[**The**]** **Attach the** tachometer or other device **[**shall be attached**]** to the motor vehicle in accordance with the tachometer or device manufacturer's instructions. For 1996 and newer model year vehicles, **use** the OBD data link connector **[**shall be used**]** to monitor RPM. In the event that an OBD data link connector is not available or that an

RPM signal is not available over the data link, **use instead** a tachometer **[**shall be used instead**]**;

[4.**] 3. [**The**]Ensure that the** vehicle's transmission **[**shall be**] is** in park or neutral;

[5.**] 4. [**The**] Increase the** vehicle engine speed **[**shall be increased**]** from idle to between 2,200 and 2,800 RPM and **[**maintained**] maintain it** at that level for the duration of the test, not to exceed 30 seconds. If the engine speed falls and remains below 2,200 RPM or exceeds and remains above 2,800 RPM for more than two consecutive seconds during the test period, **invalidate** the measured value **[**shall be invalidated**]** for that sampling period and **extend** the test duration **[**extended**]** accordingly. If any excursion outside of the allowable RPM range lasts for more than ten seconds, **invalidate** the test **[**shall be invalidated**]**, and **initiate** another 2,500 RPM test **[**shall be initiated**]**; **[**and**]**

[6.**] 5. [**Exhaust**]Measure exhaust** concentrations **[**shall be measured**]** as percent carbon monoxide and parts per million hydrocarbons after **obtaining** stabilized readings **[**are obtained**]** or at the end of 30 seconds, whichever occurs first **[**.**] ;**

6. If the percent carbon monoxide or parts per million hydrocarbons recorded in (a)5 above exceeds the applicable standards specified in Table 2 at N.J.A.C. 7:27-15.6, repeat the 2500 RPM test procedure in accordance with (a)4 and 5 above after the vehicle engine has been operated at idle mode for at least 30 seconds and demonstrates no signs of overheating as determined at N.J.A.C. 7:27B-4.2(b)4;

7. If the percent carbon monoxide or parts per million hydrocarbons recorded in (a)6 above exceeds the applicable standards specified in Table 2 at N.J.A.C. 7:27-15.6, the motor vehicle has failed the 2,500 RPM test; and

8. If the percent carbon monoxide or parts per million hydrocarbons recorded in (a)6 or 7 above does not exceed the applicable standards specified in Table 2 at N.J.A.C. 7:27-15.6, the motor vehicle has passed the 2500 RPM test.

[(b) A determination shall be made that the motor vehicle has passed the 2500 RPM test if the measurements made of the hydrocarbons and carbon monoxide in the exhaust emissions indicate that the concentration of each is less than or equal to the applicable standards specified in Table 2 at N.J.A.C. 7:27-15.6.**]**

7:27B-4.6 Procedures for the ASM5015 test

(a) **[**The testing procedure for the**]** **An inspector conducting an** ASM5015 test, **[**to be used**]** to determine a **gasoline-fueled** motor vehicle's compliance with the exhaust emission standards set forth at N.J.A.C. 7:27-15.6(b)3, shall **[**consist of an ASM5015 test optionally followed by a second chance purge test.**]** **perform the test as follows:**

[(b) The motor vehicle shall be tested pursuant to (a) above in as-received condition with all accessories off. Its engine shall be at normal operating temperature and not overheating (as determined by the vehicle's temperature gauge or temperature warning light, a boiling radiator, or other visual observation).

(c) The ASM5015 test shall be initiated as follows:**]**

1. **[**The**]** **Ensure that the** dynamometer **[**shall be**]** **is** warmed up, in stabilized operating condition, **and is** adjusted and calibrated in accordance with the procedures recommended by the dynamometer manufacturer;

2. **[**The**]** **Position the** motor vehicle **[**shall be positioned**]** on the dynamometer and, if necessary, **[**secured**]** **secure it** according to protocol recommended by the dynamometer manufacturer;

[3. The evaporative purge test apparatus shall be connected and the procedures for the evaporative purge test shall be performed as specified in N.J.A.C. 7:27B-4.11;**]**

[4.**]** **3.** **[**The**]** **Set the** dynamometer **[**shall be set**]** at a load setting determined by **[**the following equation:

L = IW/250

where: L = load, in horsepower; and IW = vehicle inertia weight, in pounds;**]** **the approved motor vehicle emission testing equipment after entry of appropriate motor vehicle parameters, such as body style and number of engine cylinders, in response to the equipment-generated prompts;**

[5.**]** **4.** **[**The**]** **Insert the** sample probe **[**shall be inserted**]** into the motor vehicle's tailpipe to a minimum depth of 10 inches. If the motor vehicle's exhaust system prevents insertion to this depth, **use** a tailpipe extension **[**shall be used**]**. For motor vehicles equipped with multiple **[**exhaust pipes**]** **tailpipes**, **take** exhaust gas measurements **[**shall be taken**]** from all **[**exhaust pipes**]** **tailpipes** simultaneously; **[**and**]**

[6.**]** **5.** **[**A**]****When conducting the ASM5015 test, operate a** motor vehicle with an automatic transmission **[**shall be operated during the ASM5015 test**]** with the gear selector in drive, and **operate** a motor vehicle with a manual transmission **[**shall be operated**]** in first **, [(]**or, if more appropriate, second**[)]** gear.

[(d) At the beginning of the ASM5015 test,**]** **6.** **Accelerate** the motor vehicle **[**shall be accelerated**]** to a speed of 15 MPH as indicated on the dynamometer speed indicator. **[**This**]** **Maintain this** speed **[**shall be maintained**]**, ±1.0 MPH, for the duration of the test sequence. The test sequence shall begin when the dynamometer speed reaches 15 MPH and shall consist of a stabilization period**[**,**]** **and** a pass/fail decision period **[**, and a second chance purge test**]** **as follows**:

[1.**]** **i.** The stabilization period shall begin at a test time of zero seconds (T = 0) and shall proceed until an elapsed time of T = **[**30**]** **25** seconds;

[2.**]** **ii.** The pass/fail decision period shall immediately follow the stabilization period, beginning at T = **[**31**]** **26** seconds. The vehicle shall pass the ASM5015 test if, at any point between T = **[**46**]** **26** seconds and T = **[**106**]** **90** seconds, measurements made of the hydrocarbons, carbon monoxide and oxides of nitrogen in the exhaust emissions indicates that the concentration of each is less than or equal to the applicable standards established in Table 3 at N.J.A.C. 7:27-15.6;

[3.**]** **iii.** If, prior to T = **[**106**]** **90** seconds, the vehicle has passed the ASM5015 test **[**and the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11**]**, **immediately terminate** the test **[**shall be immediately terminated**]** in accordance with **[**(e)**]** **(a)7** below; **and**

[4. If, prior to T = 106 seconds, the vehicle has passed the ASM5015 test, but has not passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the test sequence shall continue until T = 106 seconds or until the vehicle passes the evaporative purge test, whichever is less;**]**

[5.**]** **iv.** If, at T = **[**106**]** **90** seconds, the vehicle has not passed the ASM5015 test, **[**but has passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11,**]** the vehicle shall be determined to have failed the ASM5015 test and the test shall be immediately terminated in accordance with **[**(e)**]** **(a)7** below; **and**

[6. If, at T = 106 seconds, the vehicle has not passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, regardless of the ASM5015 test results, a second chance purge test shall be immediately performed in accordance with (d)7 below;

7. Between T = 106 seconds and T = 116 seconds, the dynamometer load setting shall be adjusted in accordance with 40 C.F.R. 85.2221(c)(5) and the vehicle accelerated from 15 MPH to a speed of 35 MPH ±2.0 MPH. If, at any time between T = 116 seconds and T = 146 seconds, the vehicle has passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the test shall be terminated in accordance with (e) below.

8. If, at T = 146 seconds, the vehicle has still not passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the vehicle shall be determined to have failed (that is, not passed) the evaporative purge test and the test shall be immediately terminated in accordance with (e) below;**]**

[(e)**]** **7.** **[**The**]** **Conclude the** ASM5015 test **[**shall be concluded**]** by placing the vehicle's transmission in park or neutral after safely bringing the vehicle's drive wheels to a complete stop using the vehicle's brakes.

7:27B-4.7 Procedures for the IM240 test

(a) (No change.)

(b) The procedures for the IM240 test are specified as follows:

1. On and after the date EPA promulgates the exhaust test procedures to be used for the IM240 test at 40 C.F.R. 85.2221, such procedures and all subsequent revisions thereto shall be incorporated herein by reference;

2. Until EPA promulgates such procedures, the applicable procedures shall be those described in the EPA technical guidance document **[**EPA-AA-RSPD-I/M-96-1**]** **EPA420-R-98-010**, entitled **[**High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996**]** **IM240 and Evap Technical Guidance**, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection. If the emissions of carbon monoxide, hydrocarbons, or oxides of nitrogen recorded using these procedures exceed the applicable standards specified in Table 4 at N.J.A.C. 7:27-15.6, the motor vehicle shall be determined to fail the IM240 test.

7:27B-4.9 Procedures for the evaporative pressure test

(a) The testing procedure for the evaporative pressure test, to be used to determine a motor vehicle's compliance with the evaporative pressure test requirements at N.J.A.C. 7:27-15.5(f)4, is specified as follows:

1. (No change.)

2. Until EPA promulgates such procedures and standards, the applicable procedures and standards shall be those described in the EPA technical guidance document **[**EPA-AA-RSPD-I/M-96-1**]** **EPA420-R-98-010**, entitled **[**High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996**]** **IM240 and Evap Technical Guidance**, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

7:27B-4.10 Procedures for the evaporative purge test (Reserved)

[(a) The testing procedure for the evaporative purge test, to be used to determine a motor vehicle's compliance with the evaporative purge test requirements at N.J.A.C. 7:27-15.5(f)5, shall be conducted in accordance with either (b) or (c) below.

(b) (Reserved)

(c) The EPA evaporative purge test shall be performed in accordance with the following:

1. On and after the date EPA promulgates procedures to be used for the evaporative purge test with the IM240 test at 40 C.F.R. 85.2221, such procedures and all subsequent revisions thereto shall be incorporated herein by reference; and

2. Until EPA promulgates such procedures, the procedures to be used shall be, for a motor vehicle being tested with an IM240 test in accordance with N.J.A.C. 7:27B-4.8 or an ASM5015 test in accordance with N.J.A.C. 7:27B-4.7, those procedures described in the EPA technical guidance document EPA-AA-RSPD-I/M-96-1, entitled High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.**]**

7:27B-4.12 Procedures for the fuel cap leak test

(a) **[**If the vehicle's fuel cap is missing, the vehicle shall be determined to fail the fuel cap leak test and the fuel cap leak test shall be immediately terminated.**]** **An inspector conducting a fuel cap leak test to determine a gasoline-fueled motor vehicle's compliance with the fuel cap leak test requirements at N.J.A.C. 7:27-15.5(f)6 shall perform the test as follows:**

1. On and after the date EPA promulgates the procedures to be used for the fuel cap leak test at 40 C.F.R. 85.2222, or elsewhere in Title 40, such procedures and standards and all subsequent revisions thereto shall be incorporated herein by reference;

2. Until EPA promulgates such procedures and standards, the applicable procedures and standards shall be those described in the EPA technical guidance document EPA420-R-98-010, entitled IM240 and Evap Technical Guidance, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

[(b) If the vehicle's fuel cap is not missing, the testing procedure for the fuel cap leak test, to be used to determine a motor vehicle's compliance with the fuel cap leak test requirements at N.J.A.C. 7:27-15.5(f)6, shall be as follows:

1. If the fuel cap is not tethered, remove the fuel cap and take it to the flow test device. If the fuel cap is tethered, bring the flow test device to the vehicle;

2. Fit the adapter appropriate for the fuel cap to the flow test device;

3. Install the fuel cap on the adapter and pressurize the flow test device to 30 inches of water;

4. Compare the fuel cap leak rate to the leak rate of an orifice with a flow rate of 60 cubic centimeters per minute of air at 30 inches of water; and

5. If the leak rate of the fuel cap exceeds the leak rate of the orifice, the motor vehicle shall be determined to fail the fuel cap leak test.**]**

7:27B-4.14 Specifications for motor vehicle emission testing equipment for use in the New Jersey Enhanced Inspection and Maintenance Program

(a) Equipment used for performing the idle test, as set forth at N.J.A.C. 7:27B-**[**4.5(b)**]** **4.4(b)**, and the 2500 RPM test, as set forth at N.J.A.C. 7:27B-**[**4.6**]** **4.5**, shall **[**be in accordance**]** **conform** with **the requirements for such equipment at** 40 C.F.R. 51 Subpart S Appendix D - Steady-State Short Test Equipment, and all subsequent revisions thereto, incorporated herein by reference.

(b) Equipment used for performing the ASM5015 test, specified at N.J.A.C. 7:27B-**[**4.7**]** **4.6**, shall **[**be in accordance**]** **conform** with the following:

1.- 2. (No change.)

(c) Equipment used for performing the IM240 test, as set forth at N.J.A.C. 7:27B-**[**4.8**]** **4.7**, shall **[**be in accordance**]** **conform** with the following:

1. (No change.)

2. Until EPA promulgates such specifications, the applicable specifications shall be those described in the EPA technical guidance document **[**EPA-AA-RSPD-I/M-96-1**]** **EPA420-R-98-010**, entitled **[**High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996**]** **IM240 and Evap Technical Guidance**, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

(d) Equipment used for performing the evaporative pressure test, as set forth at N.J.A.C. 7:27B-**[**4.10**]** **4.9**, the evaporative purge test, as set forth at N.J.A.C. 7:27B-**[**4.11**]** **4.10**, or the fuel cap leak test, as set forth at N.J.A.C. 7:27B-**[**4.13**]** **4.12**, shall be in accordance with the following:

1. (No change.)

2. Until EPA promulgates such specifications, the applicable specifications shall be those described in the EPA technical guidance document **[**EPA-AA-RSPD-I/M-96-1**]** **EPA420-R-98-010**, entitled **[**High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996**]** **IM240 and Evap Technical Guidance**, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

(e) Equipment used for performing the on-board diagnostics test, as set forth at N.J.A.C. 7:27B-**[**4.12**]** **4.11**, shall be in accordance with 40 C.F.R. 85.2231, and all subsequent revisions thereto, incorporated herein by reference.